DOCKET NO: 368-011C PATENT

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Reissue application of Kinam Park et al.

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Serial No: Unassigned : Art Unit: 1711

711 0 0111 01 1711

Filed: March 22, 2004 : Examiner: J. Cooney

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For: HYDROGEL COMPOSITES AND : SUPERPOROUS HYDROGEL COMPOSITES : HAVING FAST SWELLING, HIGH : MECHANICAL STRENGTH, AND : SUPERABSORBENT PROPERTIES :

## INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

In accordance with the provisions of 37 CFR 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is directed to the documents listed on the attached forms PTO-1449. It is respectfully requested that the documents be expressly considered during the prosecution of this application, and that the documents be made of record therein and appear among the "References Cited" on any patent to issue therefor. The aforementioned documents have been considered in the parent

U.S. Serial No.: Unassigned IDS dated March 22, 2004

Accompanying Reissue Application filed March 22, 2004

application (USSN 08/855,499, now U.S. Patent 6,271,278) and the Examiner is requested to transfer the same to this application.

This Information Disclosure Statement is being filed within three months of the filing date for this reissue application. No certification or fee is required.

Respectfully submitted,

James H. Meadows, Ph.D.

H Mealow

Reg. No. 33,965

Correspondence Address

Medicus Associates 2804 Kentucky Ave. Joplin, MO 64804

Tel: (417) 781-9965 Fax: (707) 788-3665 Date: March 22, 2004

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PTO/SB/08B (10-96) Approved for use through 10/31/99. OMB 0651-0031 Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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	STATEMENT BY APPLICANT					Inventor	Kinam Park		
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Initials*	No.1		de2	Of Cited	Document	MM-DD-Y	711	Relevant rigures Appear	
		3551556		Kliment et a	al.	12-1970			
		3641237	T	Gould et al.		2-1972			
		3826678		Hoffman et	al.	7-1974			
		4178361		Cohen et al		12-1979			
		4529739		Scott et al.		7-1985			
		4649164	$\top$	Scott et al.		3-1987			
		4801457		Heller et al		1-1989			
		5147343	1	Kellenberg	er	9-1992			
	1	5352448	$\top$	Bowerstock	c et al.	10-1994			
		5750585		Park et al.		5-1998			
	+	5424265	$\top$	Weinstein		6-1995			

Smith et al.

Hitomi et al.

		OTHER PRIOR ART-NON PATENT LITERATURE DOCUMENTS  Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item	Т
Examiner Initials*	Cite No.1	(book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	Т3
IIIIIIII	110	V DARK "Enzyme-digestible swelling hydrogels as platforms for long-term oral	
	1	drug delivery: synthesis and characterization", Biomaterials (Sept. 1988), pp. 435-	
	1	441 vol 9 Butterworth & Co.	1
	<del>                                     </del>	C L BENNING Plastic Foams: the physics and chemistry of product performance	
		and process technology, Vol. 1, Polymer Engineering & Technology, (1969)	1
		Chartes 6 7 9 10 14 Wiley-Interscience	
	<del> </del>	F. RODRIGUEZ, Principles of Polymer Systems. 2 <sup>nd</sup> ed. (1982) pp. 363-378,	
		Hemisphere Publ. Corp.	$\bot$
	<b>+</b> -	Plastic Foams. Part II. K. Frisch and J. Saunders, ed. (1973) Chptrs. 12, 15, 17.	
	1	Marcel Dekker Inc	
	+	F.A. SHUTOV, Integral/Structural Polymer Foams: Technology, Properties and	
		Applications (1986) Chotrs, 1, 21. Springer Verlag	
	+	"Absorbent PVA Material Finds Medical Applications," Medical Product Mfg.	
		News Hotline (April 1, 1995)	

10-1995

4-1997

	Date	
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<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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<sup>&</sup>lt;sup>1</sup>Unique citation designation number. <sup>2</sup>See attached Kinds of U.S. Patent Documents. <sup>3</sup>Applicant is to place a check mark here if English language translation is attached.

				ATTY. DOCKET N	о.	SERIAL NO.		
INFO	RMATION	DISCLOS	YURE	368-011 C unassigned			ed	
CITATION IN AN APPLICATION				APPLICANT Kinam Park et al.				
	(PTO-1			FILING DATE March 22,	2004	GROUP		
			S. PATENT D	OCUMENTS				
EXAMINER'S					T		FILIN	iG
INITIALS	PATENT NO.	DATE		NAME	CLASS	SUBCLASS	DAT	<u> </u>
	5,451,613	9/19/95	Smith et al.					
	5,338,766	8/16/94	Phan et al.	•				
	5,154,713	10/13/92	Lind					
	5,089,606	2/18/92	Cole et al.		<u></u>			
	5,403,870	4/4/95	Gross					
	5,324,561	6/28/94	Rezai et al.					
	5,002,814	3/26/91	Knack et al.			<u> </u>		
	4,525,527	6/25/85	Takeda et al.		<u> </u>			
	5,149,335	9/22/92	Kellenberger					
	5,292,777	3/8/94	DesMarais e	t al.		ļ		
					<u> </u>			
		FOR	EIGN PATENT	DOCUMENTS	<del> </del>			
EXAMINER'S INITIALS	PATENT NO.	DATE	С	OUNTRY	CLASS	SUBCLASS	Yes Yes	No
	WO 97/2788	4 8/7/97	WO (Pear	rlstein)	-			
				I. D.A. D.A.	Poges '		<u></u>	
				le, Date, Pertinent				<del>- ·</del>
	Wichterle et al	., Hydrophilic	gels for biolo	ogical use, Nature,	100: 11	regals for erel	drug	
	delivery, J. Co	ntrolled. Rel.	, 19: 131-144	s of enzyme-diges 4, 1992A.				<u>-</u> _
	Shalaby et al., retention of en	Use of ultras zyme-digesti	sound imaging ble hydrogels	and fluoroscopic , <i>Biomaterials</i> , 13:	imaging 289-296	to study gast , 1992B.	ric	
	Chirila et al., P	oly (2-hydro	xyethyl metha	crylate) sponges a omaterials, 14: 26	s implan	t materials: In	vivo a	ind
	Skelly et al., N	lovel macrop	orous hydroge	el adsorbents for a 1051-1052, 1979.	rtificial li		_	
	Oxley et al., M	1acroporous	hydrogels for	biomedical applica	tions: M	ethodology ar	ıd	
	Barvic et al., E Mater. Res., 1	Biologic prope	erties and pos	sible uses of polyr	ner-like s	ponges, <i>J. Bi</i>	omed.	
	iviater. nes., 1	. 313-323,		DATE CONSIDERE	D			
EXAMINER				5,112 30,10102112	. <del></del>			

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

INFORMATION DISCLOSURE				ATTY. DOCKET NO. 368-011 C		SERIAL NO. unassigned		
CITATION IN AN APPLICATION			APPLICANT Kinam Park et al.					
	(PTO-1449)			FILING DATE March 22,	2004	GROUP		
		U.	S. PATENT DO	CUMENTS	<del></del>			
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			<del></del>	e, Date, Pertinent				
	1) Preparation	of porus biod	degradable pol	ble polymer implar yurethanes for the I: 1073-1081, 199	reconstr			
		-		of fast swelling hy bstract #158, 19	_	The 20th Ani	nual	
	Park et al., Honey, I blew up the hydrogels!, Pro. Intern. Symp. Control. Rel. Bioact. Mater., 21: 21-22, 1994.					ater.,		
	Kon et al., A poly (HEMA) sponge for restoration of articular cartilage defects., <i>Plast. Reconstruct. Surg.</i> , 67: 288-194, 1981.							
	Krauch et al., F 55: 539-540,	•	n on a crystall	ine matrix. (in Ger	man), <i>Na</i>	ntur. Wissens	chefte	n,
	Badiger et al., Porogens in the preparation of microporous hydrogels based on poly (ethylene oxides), <i>Biomaterials</i> , 14: 1059-1063, 1993.							
	Haldon et al., S methacrylate),			of porous films of 1972.	poly (hyd	droxy ethyl		
	Dusek et al., Structure and properties of hydrophilic polymers and their gels. XI. Microsyneresis in swollen poly(ethylene glycol methacrylate) gels inducted by changes in temperatures, Coll. Czech. Chem. Commun., 34: 136-157, 1969.						in	
	Young, A. T., I 1133, 1985.	Microcellular	foams via pha	se separation, <i>J.</i>	Vac. sci.	Technol., A4	: 1126	6- 
	gel, Polymer C	ommunicatio	ns, 32: 322-3					ide)
	properties for o	delivery of m	acromolecules	rogels with rapid s , <i>Polymer Commu</i>	nications	, 36: 887-88	9, 199	95.
	isopropylacryla	Wu et al., Synthesis and characterization of thermally reversible macroporous poly (N-isopropylacrylamide) hydrogels, <i>Journal of Polymer Science: Part A: Polymer Chemistry</i> , 30: 2121-2129, 1992.					', 	
EXAMINER			C	ATE CONSIDERE	)		-	

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

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·				le, Date, Pertinent nt sorption and des			us stin	nuli-
	sensitive absor	bent aels, in	Superabsorbe	ent Polymers, Ame	rican Ch	emical Societ	у,	
	Washington, D	C, 1994, 76	-86.					
	Hartley et al.,	The mechani:	sm of polyure	thane foam format	ion, in A	<i>dvances</i> in Po	olyuret	hane
	Technology, Jo	ohn Wiley an	d Sons Inc., N	lew York, NY, 196	8, 139.	01 Pages		
	Klempner et al., Polymeric Foams, Hanser Publishers, New York, 1991, Pages.							
10	Gordon, A. H., Electrophoresis of proteins in polyacrylamide and starch gels, American Elsevier Publishing Company, Inc., New York, NY, 1971, Pages.							
	techniques, Jo	urnal of Con	trolled Release	microcapsules: me e, 14: 111-131, 19	990.			
	Tanaka et al.,	Kinetics of s	welling of gels	, J. Chem. Phys.,	70: 121	4-1218, 197	9.	
	Gehrke, S. H., environmentall New York, 199	y responsive	wuilibrium sel gels, in Resp	lling, kinetics perm onsive Gels: Volun	eability a ne Trans	and applicatio itions II, Sprir	ns of nger-V	erlag,
	Shutov, F. A., Hanser Publish	Cellular stru	cture and prop ork, 1991, 34-	perties of foamed p	oolymers	, in <i>Polymeric</i>	Foam	ıs,
	Holly et al. W	ater wettabil	ity of hydroge	els, in Hydrogels fo , Washington, DC	r Medica , 1976,	l and Related 252-266.		
	Ratner, B. D., Fundamentals,	Hydrogel sui CRC Press,	rfaces, in <i>Hydi</i> Inc., Boca Ra	rogels in Medicine ton, FL, 1986, 85	and Pha. -94.	rmacy. Volun		
	1984: 50-63.			rant action, <i>Pharm</i>				
	Drug Developi	ment and Ind	lustrial Pharma	n of the properties acy, 6: 511-536, 1	980.			
	Anderson et a 176: 151-167	I., Polymeriz	ed lyotropic lic	quid crystals as co	ntact len	s materials, F	Physica	A,
						<del> </del>	<del></del>	
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